REMARKS/ARGUMENTS

These remarks are made in response to the Office Action of October 28, 2008 (Office Action). As this response is timely filed within the three-month statutory period, no fee is believed due. The Office is expressly authorized, however, to charge any deficiency or credit any over-payment to Deposit Account No. 50-0951.

Claims Rejections – 35 USC § 103

In the Office Action, Claims 1, 3-5, 8, 9, 23, and 24 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Hashimoto, *et al.*, "Tele-Handshake through the Internet", *IEEE Workshop on Robot and Human Communication*, 1996, pages 90-95 (hereinafter Hashimoto) in view of U.S. Patent 7,036,094 to Cohen, *et al.* (hereinafter Cohen). Claim 28 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Hashimoto in view of Cohen, and further in view of Oakley, *et al.*, "Contact IM: Exploring Asynchronous Touch Over Distance," Proceedings of CSCW, New Orleans, USA, 16-20 November 2002 (hereinafter Oakley).

Although Applicants respectfully disagree with the rejections, Applicants have amended Claim 1. A s discussed herein, the claim amendments are fully supported throughout the Specification. No new matter has been introduced by the claim amendments.

Aspects of Applicants' Invention

It may be useful at this juncture to reiterate certain aspects of Applicants' invention. One embodiment of the invention, typified by Claim 1, is a method of communicating physical human interactions over a communications network.

The method can include performing an action on a first model by a first user located at a sending system. The first model represents at least a portion of a human body including at least one among a human head, a human face, a human back and an entire human body. The first model incorporates one or more sensors. The action of the

first user includes at least one of a body movement of the first user and a change in facial expression of the first user;

The method also can include detecting portions or locations on the first model to which the first user applied force and an amount of force applied over time by each sensor. Each sensor is configured to generate and send data when a force is detected and the generated data specifies a time the force was detected, the amount of force detected, and the body part to which force was applied.

The method further can include collecting and analyzing the data generated by each sensor and determining the action intended by the first user; encoding the data into one or more messages having an intermediate data format for transmitting the determined action over the communications network to a receiving system; receiving and interpreting the one or more messages by the receiving system to determine the action specified by the one or more messages; and simulating the action by performing the action on a second user at the receiving system using a second model by activating one or more actuators incorporated in the second model. The second model represents at least the portion of the human body.

See, e.g., Specification, paragraphs [0005], [0006], [0022], [0025], [0026], and [0028]-[0033].

The Claims Define Over The Prior Art

Most human interactions that take place over a communications network take the form of electronic messages such as electronic mails or instant messages. Other forms of communication provide users with deeper levels of interaction. For example, the use or exchange of audio and/or video data over a communications network can provide an added level of realism and immediacy to communications. Still other communication systems attempt to enhance user interactions by incorporating sensory stimuli such as smell and taste. One such system can be implemented as a computer system peripheral device that can be activated responsive to control signals received over a communications

network. For example, when a user visits a Web site capable of sending appropriately formatted control signals, the peripheral device can activate. The control signals are sent from the Web site or other network location to the user's computer system. The computer system then routes the control signals to the peripheral device. The peripheral device emits the smell and/or taste dictated by the control signals to complement the Web site. Complementary systems such as this, while adding a level of realism to a user's online experience, do not serve to enhance communications among users. More particularly, such systems are not bi-directional and typically are not activated by a user for the benefit of communicating an action to another user. In consequence, the ability of a user to convey physical actions or gestures over a communications network is limited. That is, the current state of the art does not permit users to send, receive, or exchange physical human interactions such as handshakes, embraces, or the like in any meaningful way. See Specification, paragraphs [0002]-[0004].

The present invention provides a method for communicating physical human interactions over a communications network. More particularly, through one or more sensing devices, user motions, gestures, and other physical movements can be detected. The data generated by the sensing devices can be interpreted as a particular action that is encoded as a message. The message is sent to another system via a communications network. Upon receiving the message, the message can be decoded. The receiving system then activates one or more actuators which can simulate the action detected by the sensing devices. The inventive arrangements disclosed herein can be implemented to provide for a uni-directional and/or a bi-directional communication system that is capable of communicating physical human interactions between users. See Specification, paragraph [0005].

One aspect of the present invention can include a method of communicating physical human interactions over a communications network. The method can include detecting physical movement of a user, generating data specifying the physical movement, and determining at least one action indicated by the data. The data can be

generated by one or more sensors configured to detect physical movement of the user. The action can be transmitted over a communications network to a receiving system which can simulate the action. The action can be simulated by performing the action on a second user located at the receiving system. See Specification, paragraph [0006].

Hashimoto discloses a tele-handshaking system which allows two persons in two different locations to physically communicate with each other by shaking hands through the system. However, first, Hashimoto does not disclose that the human body part represented by the first model can be a human head, a human face, a human back or an entire human body. Second, since the tele-handshaking system of Hashimoto has only one intended action, namely shaking hand, it is not necessary for Hashimoto to determine the intended action from the data generated by the sensors and transmit the intended action to the receiving system. Third, Hashimoto does not disclose that the action of the first user includes at least one of a body movement of the first user and a change in facial expression of the first user, but only discloses the action as a physical contact between the operator and the hand shake device. Fourth, Hashimoto does not disclose detecting portions or locations on the first model to which the first user applied force and an amount of force applied over time by each sensor, each sensor being configured to generate and send data when a force is detected, the generated data specifying a time the force was detected, the amount of force detected, and the body part to which force was applied; collecting and analyzing the data generated by each sensor and determining the action intended by the first user; encoding the data into one or more messages having an intermediate data format for transmitting the determined action over the communications network to a receiving system; receiving and interpreting the one or more messages by the receiving system to determine the action specified by the one or more messages; and simulating the action by performing the action on a second user at the receiving system using a second model by activating one or more actuators incorporated in the second model, as recited in amended Claim 1.

Cohen does not make up for the deficiencies of Hashimoto as discussed above.

Cohen discloses a system for recognizing various human and creature motion gaits and behaviors. These behaviors are defined as combinations of "gestures" identified on various parts of a body in motion. For example, the leg gestures generated when a person runs are different than when a person walks. The system can identify such differences and categorize these behaviors. In this system, multiple gestures on a body (or bodies) are recognized simultaneously and used in determining behaviors. If multiple bodies are tracked by the system, then overall formations and behaviors (such as military goals) can be determined. See the Abstract.

Clearly, the subject matter of Cohen, which concerns behavior recognition using gesture(s), has nothing to do with the subject matter of the present invention, which concerns communicating physical human interactions over a communications network.

Cohen discloses in col. 16, lines 62-67 the following:

> *Multiple camera views can be used to further refine the identification of static gestures. The best overall match from both views would be used to define and identify the static gestures. Furthermore, the system works not just for "hand" gestures, but for any static type of gestures, including foot, limb, and full body gestures.*

Cohen discloses that the static gestures can include foot, limb, and full body gestures. However, these static gestures are not a portion of a human body of a model upon which an action can be performed in the sense of the present invention. It is noted that in the present invention, the body portion refers to what the model represents, not the human body portion itself.

Accordingly, the cited references, alone or in combination, fail to disclose or suggest each and every element of Claim 1, as amended. Applicants therefore respectfully submit that amended Claim 1 defines over the prior art. Furthermore, as each of the remaining claims depends from Claim 1 while reciting additional features,

Applicants further respectfully submit that the remaining claims likewise define over the prior art.

Applicants thus respectfully request that the claim rejections under 35 U.S.C. § 103 be withdrawn.

CONCLUSION

Applicants believe that this application is now in full condition for allowance, which action is respectfully requested. Applicants request that the Examiner call the undersigned if clarification is needed on any matter within this Amendment, or if the Examiner believes a telephone interview would expedite the prosecution of the subject application to completion.

Respectfully submitted,

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